What writing have you done for this?

What do you want to have done by the end of the retreat?

What do you think you can have done by the end of tomorrow?

What do you think you can have done by the end of tonight?

It’s important to write in sentences, as this is a warm up exercises. i.e. do not write in bullet points or list items.

So far, I have written a short treatment, of two pages, describing the main finding I want to promote in the article, and some of the potential implications of it to thinking about the fragility of peace in Northern Ireland in the context of Brexit. Further to this, I have written more material in the form of an email to a couple of staff within the university. I know one of these staff members, and have interest from him to progress further after next week.

By the end of the retreat, I hope to have a strong draft paper, though missing many of the key references, which I can pass to Brian for consideration over the following week. I also hope to have identified, and where convenient completed, a number of specific analyses which strengthen the argument and quantify the magnitude of some of the effects identified.

By the end of tomorrow, I hope either to have moved onto a different topic – most likely fertility – or to have identified that further progress on this particular project is an effective use of the finite time available.

By the end of tonight, I hope to have completed an abstract; and to have written the high level structure of the paper, including a number of topic sentences. I am not sure at this stage whether developing the structure from the topic sentences, or developing the topic sentences from the structure, would be more effective for me in this instance, and I hope that by starting to write on this I will have a clearer idea.

[words: 285]

WRITING SESSION ON WEDNESDAY EVENING [1 HOUR]

THE AIMS OF THIS SESSION ARE TO PRODUCE AN ABSTRACT, AND ALSO TO PRODUCE A SMALL NUMBER OF TOPIC SENTENCES, AND THEN TO START TO STRUCTURE THEM BY THEME. THIS WILL BE ONE HOUR LONG, AND I’VE NOT WRITTEN FOR A WHILE, SO IT MAY FEEL TOUGH. BUT I SHOULD KEEP AT IT. I SHOULD ALSO BE SURE TO TREAT IT AS SOMETHING VERY FINITE THAT I’M KEEN TO TREAT AS PRECIOUS RATHER THAN AN EXPANSE OF TIME TO TRY TO CROSS AS QUICKLY AS POSSIBLE.

ABSTRACT

Background

The ‘Troubles’ in Northern Ireland led to decades of death, destruction and cultural and social instability. Throughout much of the latter part of the Twentieth century, terrorism was something much more associated with Northern Irish Christian sectarianism than with Islamic fundamentalism in the Middle East. Terrorism in the UK was largely ‘home grown’, an outgrowth of bitter conflict and contradiction over identity in the island of Ireland, stemming from an unresolved tension about sovereignty and national self-identity which arguably began with the establishment of both the Republic of Ireland and the State of Northern Ireland in 1928[?], and exploded into a decades-long war in 1972.

Aim and methods

This paper will show how the scale of conflict after 1972 in Northern Ireland was large enough to affect the demographic records of Northern Ireland for decades. By arranging mortality risks for males and females in Northern Ireland by both age in single years, and year, producing a demographic ‘map’ known as a Lexis surface, we show how the events of 1972 led to very rapid increases in mortality rates in young adult males in Northern Ireland. We show how this mortality rate pattern is much more characteristic of wars than of trends typically observed in peacetime, and led to male death rates in Northern Ireland to exceed those of comparable populations in Eastern Europe during the height of the conflict.

Findings

The ages most affected by the mortality effects of the Troubles were between ages XXX and XXX. If mortality rates at these ages observed in Northern Ireland observed before 1972 had continued afterwards, then we estimate around XXXX more Northern Irish males would have been alive by the age of 50 in XXXX. If the mortality rates at these ages had remained at similar levels to the rest of the UK after 1972 then XXXX more Northern Irish males would have been alive by the age of 50. For females the relative disadvantage was much smaller…

Discussion

The very sharp increase in young adult mortality risks seen in Northern Ireland after 1972 compared with in the decades before suggests that the political and military events of that year, such as Bloody Sunday, ignited a ‘febrile’ and uneasy peace which had existed previously. Young adult male mortality rates then remained sharply elevated for about a decade, then moderately elevated for around a decade longer. By the time New Labour came to power in 1997, leading to the first successful peace process since 1972 and previously unthinkable power sharing arrangements which continued until 2017, most of the excess mortality likely associated with the Troubles had dissipated, suggesting there may have been more of a mutual willingness to engage in negotiations by this period than in earlier political regimes.

If the underlying sectarian tensions which allowed the events of 1972 to ‘ignite’ the decades long conflict still exist in Northern Ireland, then the state of Northern Ireland can still be characterized as politically ‘febrile’, and so there remains a clear and concerning risk that further rounds of war-like conflict risk being ‘reignited’ by future political events, the issue of the Northern Irish border in the context of upcoming Brexit negotiations being the most obvious example of a potential future flash point.

[END OF ABSTRACT]

MANUSCRIPT STRUCTURE

INTRODUCTION

METHODS

A Lexis surface is a way of representing temporal population data as if it were spatial topographic data.

The dataset used was the Human Mortality Database.

The HMD presents all-cause mortality risks by age in single years and year for around 40 countries.

The availability of death rates for the same ages and years to those available in Northern Ireland mean that detailed comparisons between age-year specific mortality risks in Northern Ireland and neighbouring countries and regions can be made.

The human toll of the Troubles in terms of death rates was estimated using a lifetable approach. This involved taking the number of males and females born in Northern Ireland from XXXX to YYYY, and applying either the actual or counterfactual age-specific mortality rates to them, with the counterfactual rates being those which might have been expected if the increases in mortality rates seen after 1972 had not taken place.

‘Counterfactual’ estimates of age-specific mortality risks during the Troubles are produced based on a number of different assumptions.

Within younger adulthood, deaths through external causes, including violent death, are predominant causes.

The R statistical programming language was used, with visualisations produced using the Lattice package.

RESULTS

DISCUSSION

[WORDS 830]

THE NEXT SESSION WILL FURTHER REFINE THE MANUSCRIPT STRUCTURE IN TERMS OF SECTIONS, SUBSECTIONS AND TOPIC SENTENCES. A SERIES OF TECHNICAL TASKS SHOULD ALSO BE DEFINED IN THE PROCESS OF DEVELOPING THIS.

THIS IS THE START OF THE FIRST SESSION ON THE SECOND DAY, THE FIRST FULL DAY OF THE COURSE. I WILL HAVE 90 MINUTES TO WORK ON SOMETHING. THE AIM OF THE NEXT 90 MINUTES WILL BE TO START TO ADD MORE TOPIC SENTENCES TO THE VARIOUS MAIN SECTIONS OF THE MANUSCRIPT. AFTER PRODUCING THE TOPIC SENTENCES, THE NEXT TASK WILL BE TO REORDER THEM IN A WAY THAT REFLECTS THE UNDERLYING STRUCTURE, AND TO PRODUCE SUBSECTIONS (SUB-HEADINGS) WHICH REFLECT THIS ‘FOUND’ STRUCTURE.

WHEN I AM WORKING ON THE RESULTS, AND POSSIBLY METHODS SECTION, IT WILL BE USEFUL TO PRODUCE SEPARATELY A SERIES OF TECHNICAL TASKS THAT I WANT TO COMPLETE, BUT NOT TO ATTEMPT TO COMPLETE THESE AT THE START.

SIMILARLY, WHEN I AM WORKING THROUGH THE INTODUCTION AND DISCUSSION SECTION, IT WILL BE IMPORTANT TO IDENTIFY PARTICULAR TYPES OF LITERATURE, AND FACTS I HOPE TO FIND WITHIN THEM, THAT I WILL NEED TO LEARN MUCH MORE ABOUT THAN I CURRENTLY DO.

BEFORE CONTINUING, IT WILL BE USEFUL TO THINK A LITTLE BIT MORE ABOUT THE PROPOSED SIZE AND DESTINATION OF THE PAPER. TO BEGIN WITH, I AM THINKING ABOUT SOCIAL SCIENCE AND MEDICINE, AND AIMING FOR SOMETHING AROUND 4000-5000 WORDS. HOWEVER THERE ARE ALSO JOURNALS LIKE POLITICAL SCIENCE QUARTERLY WHICH REQUIRE SHORTER PAPERS.

CURRENT TASK; PRODUCE TOPIC SENTENCES FOR THE INTRODUCTION

INTRODUCTION

The XXX database shows that the number of terrorist incidents in Europe peaked in XXX at XXX. Most of these terrorist incidents were ethnonationalistic, about the contestation of political rule and sovereignty in either the Basque region of Spain, or Northern Ireland.

Northern Ireland emerged as a political compromise. Previously [xxx] parties had won a majority of seats in the xxxx general election, and demanded self-government for the island of Ireland.

There have been a number of attempts to bring peace to Northern Ireland through a combination of both military and political solutions.

The negotiations which began with New Labour were considered highly successful.

For Unionists the RUC and army were seen as an occupying force to be resisted. They were seen as no a legitimate presence on Northern Irish territory.

Violence towards other groups is easier to perform when those groups are considered either a threat to one’s own group, to be somehow ‘less’ than one’s own group, or both.

It can in those groups that have a great deal in common that the perception of great and insurmountable difference can be strongest. Jonathan Swift’s satire, Gulliver’s Travels, introduced the fictional island of Lilliput, whose diminutive inhabitants had been engaged in bitter civil war for many generations, for reasons that had long since become lost to leaders on both sides. Eventually Gulliver discovered the conflict initially emerged over whether hard boiled eggs should be broken from the big or small end. The conflict had thus generated a self-perpetuating logic of its own, long after the rationale for the conflict had ceased.

The contact hypothesis argues that bringing people from different groups together, especially to work together on a common goal, can help to increase inter-group affinity.

Northern Ireland has long imposed segregation on Catholic and Protestants, both within institutions like the educational system, and physically through peace walls.

The peace walls tend to be situated in areas that are predominantly working class, such as XXX.

The effects of war on mortality risks has a distinct pattern not usually seen in peacetime. Features include: a clear start period of greatly increased mortality risk; a sharp delineation between mortality risk before and after working age; a bias towards younger over older adult ages; a rising disparity in age-specific death rates, during the conflict, between males and females.

The mortality pattern seen in males after 1972 is like that of a war, but without a clearly defined end date.

The lack of a clearly defined end-date to the Troubles, and the general pattern of two roughly decadal phases, suggests there was a kind of self-perpetuating logic to the excess mortality, but that this was attenuating over time.

Evolutionary game theory suggests that an evolved social preference towards ‘Tit-for-Tat’ behaviours between groups can act both to ensure periods of long-term cooperation (peace) between groups, as well as having the potential to perpetuate long periods of conflict. Each act of violence meted by group A on group B, by this logic, demands retaliatory counter-violence by group B to group A as revenge, and this counter violence itself demands further retaliation, leading to a cycle of internecine conflict between factions. The proposed solution was for an adaptation of Tit-for-Tat, that allowed for either forgetfulness or forgiveness. Another solution was for an external agent to manage both sides (a Hobbesian solution).

Deaths in young adulthood are much more likely to be due to external causes than those in old age.

The violent death of one person produces lasting sadness, anger, and psychological trauma in many others. These traumas can lead to worsening health outcomes and health behaviours. Each violent death therefore produces multiple victims.

The conditions that mean underlying tensions and antipathies between groups can turn suddenly into violence can be thought of a system with two states: peace and war. In an unstable system it may take only a slight input signal spike to change the steady state of the system from one state to the other. In less unstable systems the magnitude of the input may have to be much higher to produce such a change of state, and it may take less external input in the opposite direction to bring about a reversal in state.

The conditions of febrility arguably still exist in Northern Ireland.

The political and logistical issues and implications of Brexit have the potential to nudge Northern Ireland back from peace to war. For many, and Irish identity is also a European identity, and so to strip away the latter can be perceived as an attack on the former. Similarly, imposing physical barriers between the Republic of Ireland and Northern Ireland risks upsetting the delicate balance of competing interests in Northern Ireland.

[WORDS: 782]

NEXT TASK: Produce some skeleton structure for the results section

RESULTS

Figure XXX shows how the log age-specific mortality rates in Northern Ireland changed over time for both males and females. It is clear from this that 1972 marked a very abrupt increase in the mortality rates for young adult males, but not to the same extent for females of the same age.

Figure XXX and Table XXX show how the number of deaths and death rates increased.

Table showing

Year: 1965, 1966, …., 2000

Age group: 0-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-45, 46-50; 51-65

Gender: male and female

Population

Deaths

Death rates /100 000

What are some of the pieces of analysis it would be good to include in the paper?

How did mortality rates at different ages change over time?

How did the population change over time?

How did the population composition change over time?! (Too vague!)

What is the estimated percentage increase in death rates observed during the conflicts?

How many extra people are estimated to have died as a result of the changes?

It is important to do some literate analysis – i.e. to produce figures and write up how they’re done and what they mean as soon as I’ve done them.

FOR SOME REASONS I’VE SORTT OF LOST TRACK AND LOST FOCUS. I THINK THIS COULD BE INFORMATIVE ABOUT HOW MUCH I CAN USEFULLY PURSUE THIS EXERCISE. I THINK I AM UNPREPARED FOR THIS AS A WRITING EXERCISE, IN PARTICULAR WITH REGARDS TO THE LITERATURE. HOWEVER. I COULD PROBABLY PRODUCE QUITE A LOT OF MATERIAL JUST BY DOING SOME DESCRIPTIVE STATS AND SAYING WHAT THEY MEAN. TOGETHER WITH DESCRIPTION ABOUT STATISTICAL METHODS THIS COULD EASILY OCCUPY A COUPLE OF THOUSAND WORDS, AND BE PRETTY INSIGHTFUL. I THEREFORE THINK THIS POINTS TOWARDS A CHANGE OF TACK FOR THE NEXT SESSION.

MY NEXT TASK WILL BE TO PRODUCE SOME DESCRIPTIVE ANALYSIS AND WRITE THEM UP. I AIM NOT TO GET BOGGED DOWN TOO MUCH IN THE ANALYSIS, BUT TO HAVE LOTS OF MATERIAL TO WRITE ABOUT. I HOPE TO GET 500-1000 WORDS WRITTEN AS WELL AS SOME FIGURES AND TABLES.

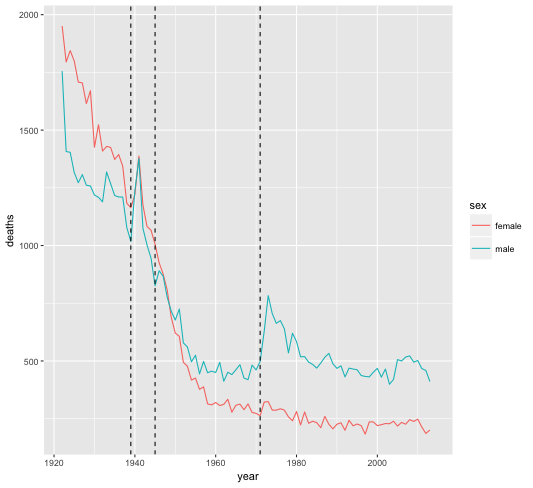
START OF SESSION 1\_2

The following figure shows the total number of deaths recorded in Northern Ireland, for males and females aged between 15 and 45 years inclusive, between its formation in 1922 and 2013 [to confirm]. Dashed lines are used to indicate the start of the Second World War, as well as for the year 1971. We can see from this that there were more annual recorded deaths for women in this age group in the 1920s and 1930s than for men, likely due to the risk of death during childbirth. The last year in which there were more recorded deaths for women in this age group than men was in 1948. Since 1948 the difference between male and female death counts in this age range has continued to grow.

A dashed line has been added for the year 1971 because there is a very clear and sharp increase in the number of male death rates after this year. Peaking at more than 750 deaths in 1972.

The average number of male deaths in this age group per year, between 1958 and 1971, was 456; for females the average over this period was 301.

By contrast, in each year from 1958 to 1971 there had been fewer than 500 male deaths reported in this age range, and fewer than 300 female deaths, suggesting the events of 1971-1972 are responsible for slightly over a third of all male deaths in this age range in 1972.



THIS IS THE END OF THIS SESSION – I’VE GONE DOWN THE RABBIT WARRAN OF STATISTIICAL ANALYSIS, BUT THINK THIS IS THE MOST USEFUL ACTIVITY FOR NOW.

RESTART OF SESSION 1\_3 – UNFORTUNATELY MY COMPUTER CRASHED AND I LOST MOST OF WHAT I’D BEEN WORKING ON IN THIS PARTICULAR SESSION.

The number of ‘excess deaths’ in this age range which occurred after 1971 can be estimated in a crude way by comparing the number of deaths after 1971 with the average number of deaths in this age group between the years of 1958 and 1971 inclusive, which for males had been roughly the same over this period.

Assuming the fall in number of excess male deaths after 1973 is exponential, the fall can be estimated to be around 15.4% per year. From this the half life, i.e. time taken for the excess to decay by half, can be calculated as around 4.5 years (calculated as 0.5 = exp(-Bh) so ln(0.5) = -Bh so h = -ln(0.5)/B)



The cumulative total ‘excess deaths’ associated with the post Troubles period, i.e for all years from 1972 to 1991 inclusive, can be estimated as 955 by 1975, 1727 by 1980, 1933 by 1985, and 2172 by 1991. Interestingly, a simple exponential decay model, beginning with a peak in the year 1973, predicts a total of 2174 excess deaths by 1991, suggesting the pattern of excess deaths largely did seem to follow one of a sharp rise followed by an exponential decay, and that the process can largely be thought of in these terms.

Within the next CHUNK OF TIME I WILL CONTINUE WITH THIS EXERCISE, AND TO PRODUCE A TOTAL OF 1000-1500 ADDITIONAL WORDS.

The following shows age-specific mortality rates in England/Wales, Northern Ireland, and Ireland, from 1958, indexed to the average of the age-specific values in years 1958 to 1963. Within this, light red indicates no change, whereas greens and blues indicate rising mortality compared with those in the 1958-1963 period.

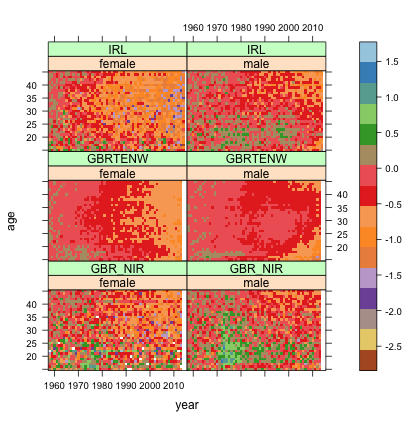
The figure is complex, detailed, and allows a number of important comparators to be made: within a population over time, within a population at different ages, and between two populations at the same age and in the same year. We will first look at some patterns of difference between male and females rates of mortality rate change in Ireland (IRL) and England & Wales (GBRTENW), to get a sense of the kinds of pattern that can usually be expected, before turning to the case of Northern Ireland.

In both Ireland (IRL) and England & Wales (GBRTENW) age-specific mortality risks have tended to improve faster for females than for males, as evidenced by the light red shades becoming dark red, then orange, when looking left to right across the subfigures, in earlier years for females than for males. For example, cells are shaded orange for most ages from around 1980 onwards in Ireland for females, whereas these orange shaded cells only become apparent after around 1990, and above the age of around 35 years, for males in Ireland. Similarly, orange cells are visible for females at most ages over 20 years for females in England & Wales after around 1990, and are visible at almost all ages in this range for females after around 2000; by contrast, for males in England & Wales these orange shades only start to appear at younger ages (under around 20 years) and above the ages of 40 years, after around 2000. Another notable pattern for males in England & Wales is a faint ‘island’ of light red cells (slight or no improvement) appearing from around 1985 to 2005, surrounded by darker red cells (larger improvement), around the ages of 25-35, indicating that this age group may have experienced a partial reversal in mortality risk improvements not seen in either females in England & Wales, or males in Ireland. Overall, these comparisons make it clear that rates of improvement in mortality in these age ranges for males should not be expected to be as large as for females over this period; however, as we will see, the patterns for males in Northern Ireland are qualitatively different to this too.

The subfigures for Northern Ireland (GBR\_NIR) are shown in the bottom row. Because Northern Ireland has a much smaller population size than either England & Wales or the Republic of Ireland [provide population sizes, circa 2010 or similar], there are fewer observations with which to produce estimates of age-specific mortality rates in each year, and so more variation from rates at specific ages observed in consecutive years; this results in a ‘noisier’ or more ‘speckled’ appearance to the figure, as well as a number of cells for females that are white, indicating missing values (i.e. no deaths at that age and in those years). However even given this ‘noisy’ data a number of patterns are revealed in these figures.

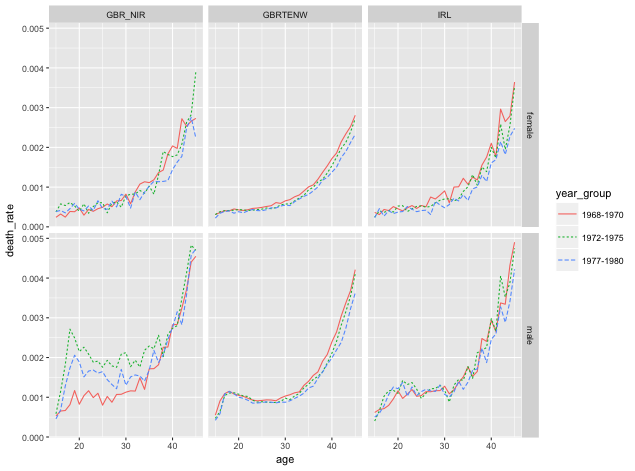
The effect of the Troubles on mortality is apparent in the bottom right subfigure, in the large patches of green that appear after 1971 in from around the age of 16 years of age and up, indicating a sudden and moderate worsening in mortality rates in this year. As seen in figure XXX, which groups death rates in this very broad age group into three periods, it appears worsening mortality rates are most apparent at some of the younger adult ages, around 18-25 years; and as seen in figure XXX, which shows the number of deaths by year, it is also apparent in this tile that the sharpest worsening in mortality rates occurred immediately after the Troubles began.

By contrast, the subfigure for females in Northern Ireland appears as something of a noisy ‘hybrid’ of the figures for females in Ireland, and England & Wales, with perhaps a somewhat lower proportion of orange-coloured cells than in the former, and slightly higher proportion of orange-coloured cells in than in the latter. Some proportion of cells are also coloured green, indicating slightly worsening mortality, but unlike for males in Northern Ireland, these green cells appear more isolated, surrounded by cells of unlike colours, rather than clearly clustered with other green cells, suggesting that most of these values are not strongly indicative of a clear pattern of worsening or improvement. (A partial exception to this may be around the age of 18-25 and in the late 1970s, but it is difficult to say.)



To explore further the age-distribution of excess mortality during the Troubles, the following shows this age distribution for three time periods: 1968-1970, 1972-1975, and 1977-1980. This is shown for males and females, and for Northern Ireland, England and Wales, and the Republic of Ireland, in separate boxes.

It is clear from this figure that, whereas there was little change in age-specific mortality between periods for women in any of the three countries, or for males in either Ireland or England and Wales, there was a sharp rise in mortality risk from around the age of 17-18 in Northern Ireland. This meant that, during the period 1977-1980, mortality risks were around as high at the age of 18 – likely due to death from external causes – as they are around the age of 40.



The sharp rise in death rates in the 1972-1975 period, at age 18 compared with younger ages, suggests that once males in some Northern Irish communities reached this age they were either more likely to be ‘recruited’ into paramilitary organisations to engage in violent activities, or more likely to be targeted as enemies by conflicting sides, or more likely both. As well as the peak young adult mortality rate falling from the 1972-1975 period to the 1977-1980 period, the age of peak young adult mortality has increased slightly, from around the age of 17 to 18 years.

WHERE HAVE I REACHED, BY ROUGHLY THE END OF THE FIRST FULL DAY?

I THINK I’VE REACHED A POINT WHERE I’VE REALISED THAT MY KNOWLEDGE OF THE LITERATURE IS VERY INADEQUATE TO WRITE MUCH ABOUT THE BACKGROUND, AND SO THIS WILL NEED THE SUPPORT OF SOMEONE ELSE.

I’VE ALSO STARTED TO REACH A POINT OF CLARITY ABOUT THE MAIN SEQUENCE OF ARGUMENT, AND HOW TO LINK THE HISTORICAL ANALYSIS OF THE TROUBLES WITH CONTEMPORARY DEBATES ABOUT BREXIT.

THIS IS BASED ON ARGUING THAT THE FUNDAMENTAL PATTERN OF THE CONFLICT IS ONE OF CONFLICT BEING LIKE A DAMPENED SYSTEM THAT RESPONDS TO AN INPUT WITH AN PULSE OF VIOLENCE FOLLOWED BY AN EXPONENTIAL DECAY. WHILE THE PULSE IS STILL DECAYING, AND REMAINS ABOVE A LEVEL WHERE IT CAN BE DETECTED ABOVE THE NOISE OF THE POPULATION PROCESS SYSTEM AS A WHOLE, THERE IS LITTLE CHANCE OF EITHER INCREASING OR REDUCING THE RATE OF DECAY. IN PRACTICE, THIS MEANS THE INTERNAL LOGIC OF THE CONFLICT IS TO SOME EXTENT SELF-PERPETUATING.

HOWEVER, ONCE THE SYSTEM HAS SETTLED, THERE REMAINS A RISK THAT FURTHER INPUTS CAN PRODUCED HIGHLY AMPLIFIED OUTPUTS, THAT FURTHER OUTPUT PULSES ARE POSSIBLE, AND CAN BE OF A MAGNITUDE MANY TIMES GREATER THAN THE INPUT PULSE.

IN ORDER TO GET A SENSE OF THE AMPLIFICATION OF THE SYSTEM, IT WOULD BE USEFUL TO GET SOME IDEA OF THE NUMBER OF PEOPLE KILLED DIRECTLY BY THE ARMY AND POLICE, COMPARED WITH THE NUMBER OF PEOPLE WHO THEN DIED IN THE FIRST YEAR AFTERWARDS.

IT IS IMPORTANT TO GO BACK TO THE CONCEPT OF IDEAL TYPES – A CONCEPT THAT LINKS BOTH THE ANALYSIS OF ELECTRONIC GOODS AND SOCIAL SYSTEMS (THROUGH WEBER). TO THIS END IT WOULD BE GOOD TO PRODUCE SOME ELECTRONICS-STYLE STYLISED FIGURES SHOWING HOW THIS SYSTEM MAY WORK. (NB I CAN ALSO THINK ABOUT THE SYSTEM HAVING SOME KIND OF MINIMUM THRESHOLD BELOW WHICH IT IS UNRESPONSIVE. I.E. A TIPPING POINT, AS SEEN IN NEUROLOGICAL MODELLING AND CLIMATE CHANGE – POTENTIATION, AXON HILLOC AND SO ON.)

DAY TWO – SESSION ONE

I HAVE DECIDED THAT THERE IS FURTHER POTENTIAL FOR DEVELOPING THIS PAPER WITHIN THE RETREAT. THIS IS IN PART BECAUSE I REALISED ONE OF THE FIGURES I PRODUCED IS NOT QUITE RIGHT, AND SO BY CORRECTING THIS A CLEARER PATTERN EMERGED. AMONGST OTHER THINGS THIS SHOWS THAT THERE MAY BE A SMALL ECHO OF THE PATTTERN ASSOCIATED WITH THE TROUBES FOR MALES IN THE REPUBLIC OF IRELAND AS WELL AS NORTHERN IRELAND.

SOME PARTICULAR TASKS FOR THE CURRENT SESSION INCLUDE:

* TO REWRITE THE SECTION OF THE LEXIS SURFACE USING THE CORRECTED LEXIS SURFACE [done – 780 words]
* TO START TO WRITE ABOUT AND DEVELOP A MODEL WHICH INCORPORATES THE CONCEPT OF AN INITIATION EVENT, A RESPONSIVE SYSTEM, AND A DECAY FUNCTION, AS WELL AS VARIATION BY AGE.
* TO WRITE SOMETHING ABOUT THE IMPLICATIONS OF THE EXPONENTIAL DECAY FUNCTION STYLE APPROACH TO THINKING ABOUT THE PATTERN OF CONFLICT IN NORTHERN IRELAND. WITHIN THIS TO ARGUE THAT IF NORTHERN IRELAND CAN STILL BE THOUGHT ABOUT IN THIS WAY THEN THE ISSUE OF BREXIT AND THE NORTHERN IRISH BORDER WALL RISKS INITIATING A NEW WAVE OF VIOLENCE.
* TO SUMMARISE NEXT TASKS AT THE END OF THE SESSION. [DONE]
* A GOOD WORD COUNT TO AIM FOR WILL BE 500-1000 WORDS. [DONE]

IN THE NEXT SECTION I WILL DISCUSS SOME OF THE APPROACHES TO MODELLING AND DESCRIBE SOME OF THE MAIN RESULTS. WITHIN THIS IT WILL BE IMPORTANT TO SHOW SOME OF THE PREDICTED SURFACES FOR NORTHERN IRELAND - ONE IDEA WOULD BE TO PRODUCE A MODEL TO FIT NORTHERN IRELAND AND OTHER COUNTRIES, THAT EXCLUDES THE TROUBLES YEARS – A SECOND MODEL WOULD THEN EXIST TO TRY TO EXPLAIN THE RESIDUALS BETWEEN THIS MODEL AND THE NORTHERN IRISH DATA.

DAY TWO – SESSION TWO

IN THIS SESSION I WILL FOCUS ON WRITING UP THE MODEL. IN THE PROCESS OF DOING THIS I WILL HELP TO THINK MORE CLEARLY ABOUT MODEL CONSIDERATIONS AND SPECIFICATIONS. SOME AREAS TO COVER INCLUDE:

* COMPARATORS – OTHER COUNTRIES; FEMALES AND MALES; OLDER AGES
* ONE STAGE OR TWO STAGE? IN THE TWO STAGE APPROACH THE IDEA WOULD BE TO FIRST PRODUCE ESTIMATES OF THE COUNTERFACTUAL DEATH RATES IF THE NORTHERN IRELAND TROUBLES HAD NOT STARTED, USING BOTH VALUES OBSERVED IN EARLIER AND LATER YEARS, AND IN NEARBY COUNTRIES. THEN, A SECOND MODEL WILL BE DEVELOPED WHICH AIMS TO MODEL THE RESIDUALS OVER THE PERIOD OF THE TROUBLES. THE FIRST MODEL IS LIKELY TO BE SOMETHING LIKE THE CARTER-LEE MODEL; THE LATTER IS LIKELY TO BE SOME KIND OF EXPONENTIAL WITH TIME.

IT IS IMPORTANT TO KEEP IN MIND SOME OF THE KEY ARGUMENTS, JUSTIFYING THE APPROACH WHICH I’M NOW DEVELOPING. THIS IS THAT THE HISTORY OF THE TROUBLES IN NORTHERN IRELAND SUGGESTS THAT IT IS USEFUL TO THINK ABOUT VIOLENCE AS A DYNAMIC SYSTEM WITH MODELLABLE PROPERTIES. THIS IS A SYSTEM THAT CONVERTS AN INPUT – EXTERNAL VIOLENCE – INTO AN OUTPUT – INTERNAL VIOLENCE- ACCORDING TO A FUNCTION WITH PARTICULAR CHARACTERISTICS. THESE CHARACTERISTICS SEEM TO BE:

* IF THE MAGNITUDE OF THE INPUT IS BELOW A CERTAIN THRESHOLD TAU. DO NOTHING;
* IF THE MAGNITUDE OF THE INPUT IS ABOVE THRESHOLD TAU, RESPOND WITH AN OUTPUT OF MAGNITUDE K, WHICH DECAYS WITH TIME ACCORDING TO AN EXPONENTIAL FUNCTION WITH PARAMETER ALPHA.

A PERHAPS SURPRISING IMPLICATION OF THE ABOVE MODEL APPEARING TO FIT THE PATTERN SO EFFECTIVELY IS THAT THERE DO NOT APPEAR TO BE ANY CLEAR AND DISCRETE SUBSEQUENT PHASES IN THE CONFLICT; INSTEAD THE SINGLE INITIATING EVENT APPEARED TO SET OF A CHAIN OF EVENTS WHICH WERE THEN ONLY LITTLE INFLUENCED BY ANY PARTICULAR POLITICAL REGIMES, CIRCUMSTANCES AND EVENTS. AT THE DECADAL TIMESCALE WE ARE LOOKING AT, THE PROCESS SEEMED LARGELY SELF-PERPETUATING.

THE SOMEWHAT ABSTRACT, STYLISED REPRESENTATION OF MORTALITY PATTERNS IS USEFUL AS A COMPLEMENT TO MORE DETAILED AND SUBSTANTIVE KNOWLEDGE OF NORTHERN IRISH HISTORY AND PRE-HISTORY, AND TO KNOWLEDGE ABOUT PROCESSES OF CIVIL WAR, CONFLICT AND PEACE THAT HAVE TAKEN PLACE ELSEWHERE IN THE WORLD.

IT MAY BE USEFUL TO THINK ABOUT FIRSTLY WHETHER THE IMPETUS-INITIATION-DECAY LOGIC IS AN INHERENT AND OBDURATE CHARACTERISTIC OF NORTHERN IRELAND, A CONSEQUENCE OF ITS VERY FORMATION REPRESENTING AN ATTEMPT AT POLITICAL COMPROMISE BETWEEN FACTIONS IN THE EARLY TWENTIETH CENTURY WHOSE AIMS ARE FUNDAMENTALLY IRRECONCILIBLE. IF SO THEN THIS HIGHLIGHTS THE POTENTIAL FOR A RENEWAL OF CONFLICT IN THE YEARS AHEAD, RELATING MOST PROBABLY TO BREXIT NEGOTIATIONS AND THE NORTHERN IRISH BORDER.

IT WOULD BE USEFUL TO EXPLORE WHETHER OTHER COUNTRIES AND REGIONS WITHIN COUNTRIES THAT ARE PRONE TO SECTARIAN VIOLENCE BOTH EXHIBIT SIMILAR TRENDS IN MORTALITY RATES, AND HAVE SIMILAR HISTORICAL CONDITIONS. IF THE IMPETUS-INITIATION-DECAY PROCESS APPLIES IN ALL CASES THEN THIS STYLISED MODEL REPRESENTS A FAIRLY EFFECTIVE ‘FIRST PASS’ THROUGH THINKING ABOUT THE POTENTIAL FOR RISKS AND BOTH THE PATTERNS AND LIKELIHOOD OF CONLFICT INITIATION.

IN THE NEXT SECTION I WILL WRITE OUT THE PROPOSED MODEL APPROACH.

DAY TWO – SESSION THREE (FINAL SESSION OF THE DAY)

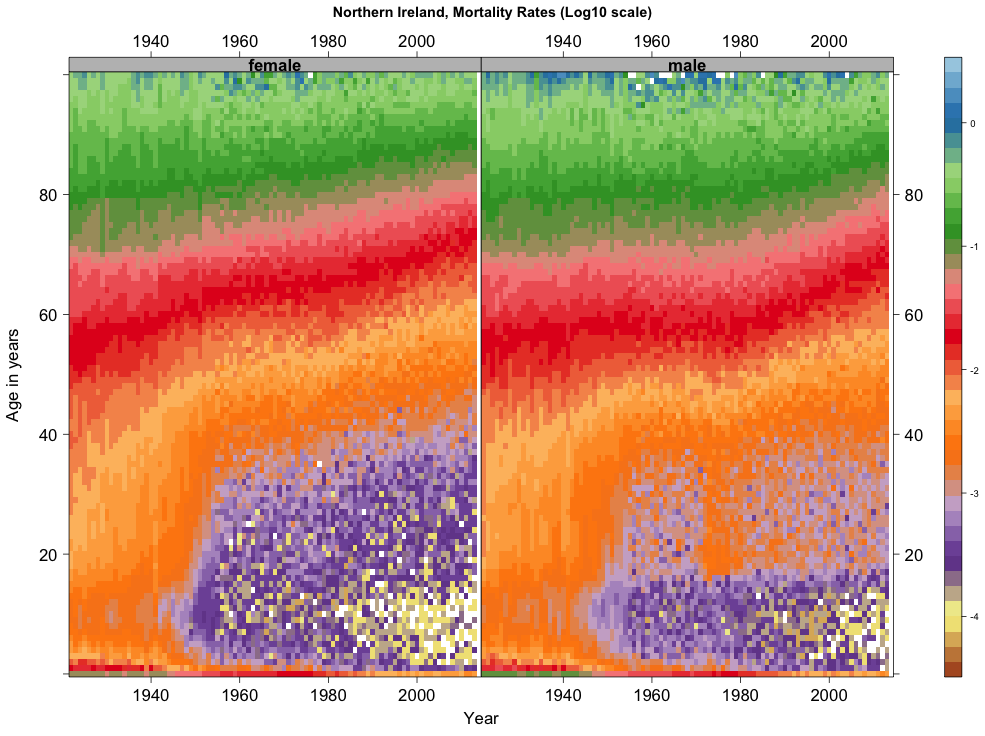
IN THIS SESSION I WILL PRODUCE A FIRST DRAFT OF THE APPROACH I WILL TAKE TO ESTIMATING THE MORTALITY EFFECTS OF THE TROUBLES ON MALES AGED 15-35 IN NORTHERN IRELAND. THIS WILL INVOLVE A TWO STAGE APPROACH, WHICH FOLLOWS THE BASIC LOGIC OF SOME OF THE FIGURES OUTLINED PREVIOUSLY. THE FIRST STAGE WILL BE TO PRODUCE SOME ESTIMATES OF AGE-SPECIFIC MORTALITY RISKS IN NORTHERN IRELAND BETWEEN THE YEARS 1972-1995, PRODUCED USING A COMBINATION OF DATA FROM MALES OF THE SAME AGE IN OTHER COUNTRIES OVER THE WHOLE PERIOD (1958-201X), AND FOR THOSE IN NORTHERN IRELAND FOR YEARS WHICH EXCLUDE TROUBLES YEARS.

IN THE SECOND STAGE THE AIM WILL BE TO COMPARE OBSERVED AGAINST PREDICTED DEATH RATES DURING THE TROUBLES YEARS, AND USE THESE RESIDUALS AS SOMETHING TO BE EXPLAINED BY SOMETHING WITH AN EXPONENTIAL DECAY FUNCTION.

IN TOTAL I WANT TO WRITE BETWEEN 500-1000 WORDS, BUT THE MAIN POINT IS TO MAKE PROGRESS IN THINKING ABOUT THE MODELLING APPROACH AND HOW THE PAPER, AND THE ARGUMENTS IT PRESENTS, CAN BEST STRUCTURED.

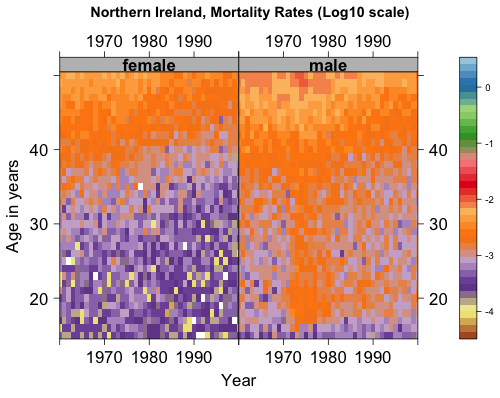
SECTION DESCRIBING THE LEVELPLOT FOR NORTHERN IRELAND

Figure XXX shows how age-specific mortality rates have changed in Northern Ireland between 1922 and 2014 inclusive, for females in the left subfigure and males in the right subfigure. A qualitative, paired colour scheme (The ‘Paired’ colour scheme from the RcolourBrewer package) was used to make it easier to identify those mortality values associated with the colouring and shading of different cells in the two figures. The legend to the right of the figure shows how mortality values correspond with different colours and shadings. Mortality rates are shown on a base10 scale, meaning that the numbers on the legend indicate the ‘number of zeroes’ in that particular mortality risk; for example, -1 indicates a risk of dying in the next year of 10-1 or 1/10, -2 indicates a risk of dying in the next year of 10-2 or 1/100, and so on. White cells indicate missing values, due either to missing numerators (no deaths) or missing denominators (no persons of that age and sex in that year); we can see that most of these missing values occur in childhood, between around the ages of three and 14, and are more prevalent for females than males.



The effect of the Troubles on mortality risks is apparent by noting the emergence of a patch of orange cells between around the age of around 16 and 40, in the male (right) subfigure, beginning in the early 1970s. This orange cluster of cells is surrounded by light purple patches to its left and right, more orange above, and darker purple patches below.

The following figure ‘zooms in’ on the age range 15 to 50 years, and the year range 1960 to 2000, to show the region of the surface of interest more clearly. This makes it clearer that the increase in age-specific mortality risks occurred was very rapid, between the years 1971-1973, whereas the fall in the subsequent fall in mortality risks was much more gradual. In terms of ages affected, it appears there were sharp mortality rate increases for males between the ages of 16 or 17 years of age, up to the late thirties; above these ages mortality rates do not tend to be higher by 1975 than they had been in 1975. The Troubles effect is highly gendered, and is not apparent in the female Lexis surface on the left.

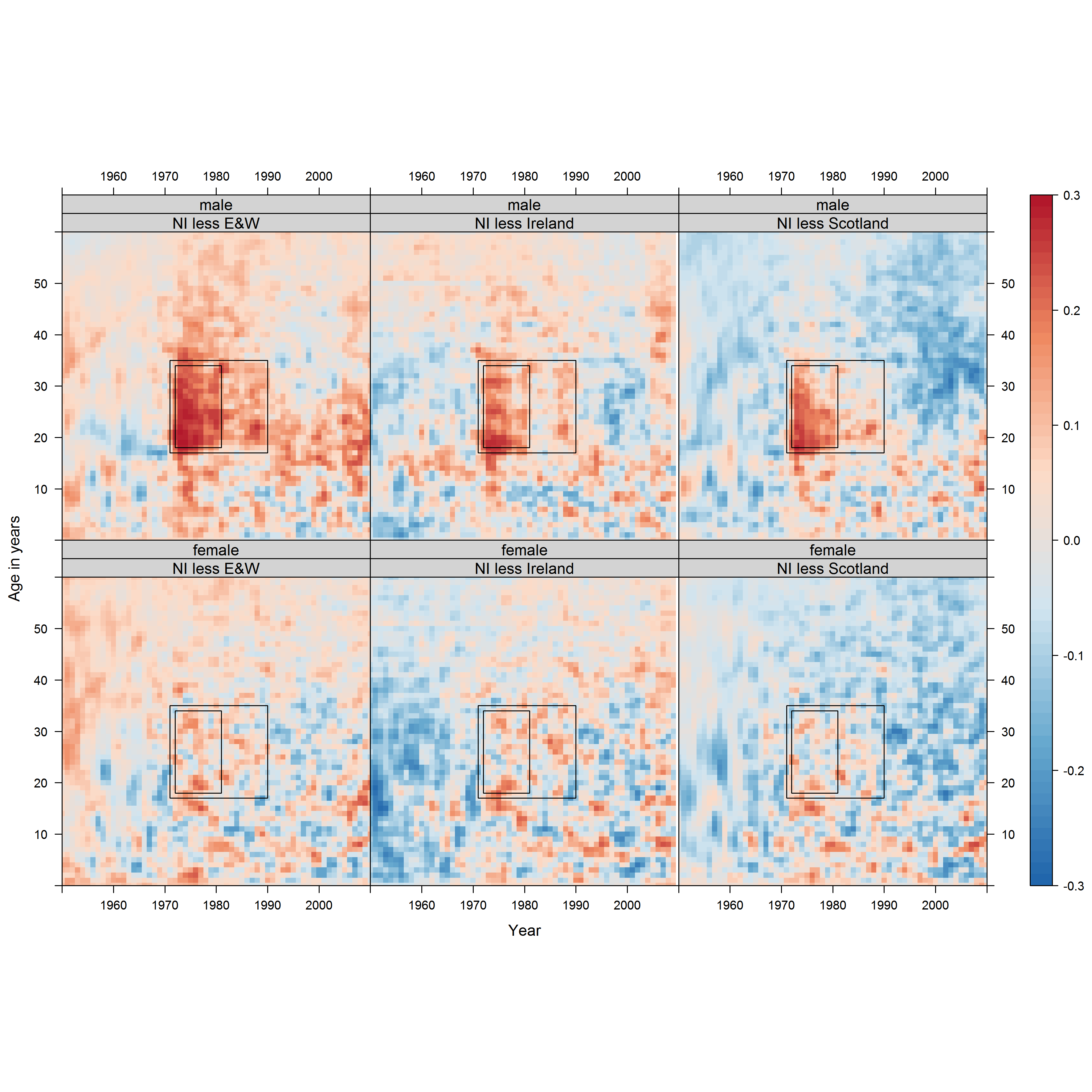


The kind of exploratory data analysis performed here allows us to refine our assumptions about the processes which led to the mortality rate increases, and so to start to build appropriate statistical models based on appropriate subsets of the data. For example, we know from this analysis that the Troubles effect was highly gendered, and so it would be inappropriate to pool values from females and males, also that the effect predominantly occurred in young adults, as well as some older adolescents. Subsequent models therefore focus mainly on the age range 16-35 years, and on males.

[TOTAL 663 WORDS]

An additional way of getting a sense of the effect of the Troubles on morality rates in Northern Ireland is by comparison with nearby countries and regions, using an approach we call a Comparative Level Plot (CLP). A CLP can be thought of as the result of subtracting the mortality Lexis surface from population A from population B, where the Lexis surfaces of both populations cover the same range of ages and years. Further details are presented in XXX and XXX. Within the Lexis surfaces, reds indicate that age-specific mortality rates in Northern Ireland are higher than for people of the same sex, and of the same age, in the same year in the comparator population; conversely blues indicate lower matched mortality risks. The shade of either red or blue indicates the magnitude of the difference between matched populations, with darker shades indicating greater differences and lighter shades smaller differences.

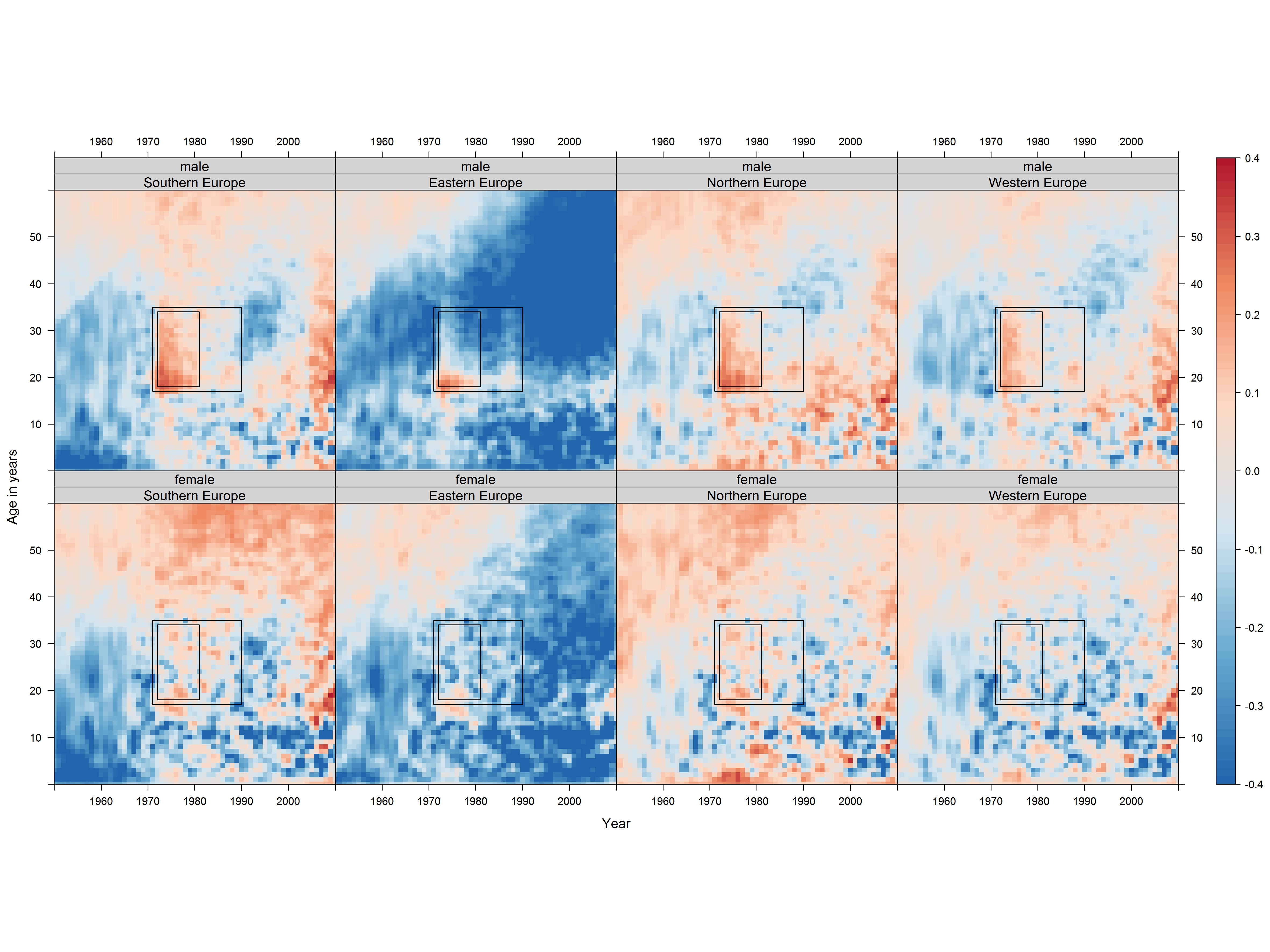
The following CLP compares log mortality risks in Northern Ireland against England & Wales in the left column, the Republic of Ireland in the middle column, and against Scotland in the right column; the top row shows these comparisons for males and the bottom column presents these comparisons for females. The data have been smoothed slightly using the blur function in the spatstat package to make general patterns and trends easier to identify. Within each of these figures, the period and age group that appears to have been most affected by the Troubles is indicated using a pair of concentric rectangles.



The CLPs support the conclusions that were drawn from the previous level plots, but also suggest that the effects of the Troubles may have been slightly less contained to particular age groups than the earlier plots may have implied. In particular, by looking at the top left subfigure, comparing male mortality rates in Northern Ireland against those in England & Wales. We can see in this that comparative mortality in Northern Ireland worsens for males in Northern Ireland at both ages below 17, and above 36, after the onset of the Troubles, compared with those seen in England & Wales. Though these relative comparative differences are proportionately smaller than those for males in the most affected ages, they indicate there may have been some kind of ‘spillover effect’ on mortality even for those age groups unlikely to be actively engaged in conflict. The bottom left subfigure shows that no similar increase in comparative mortality occurred for females after the onset of the Troubles compared to matched populations in England & Wales.

Comparisons with the Republic of Ireland, and with Scotland, further illustrate both the sharp change in mortality risk that occurred in males in the most affected age groups after the start of the Troubles, and also that this effect was highly gendered; there are, however, some indications that comparative mortality in young adulthood was worsened for females in the first three or so years after the Troubles, though if this effect exists it is much smaller than that for males. One consequence of the Troubles was to briefly ‘reverse’ Scotland’s position as tending to have the highest age-specific mortality rates in the UK (and Western Europe), for young adult males between around 1972 and 1990. Indeed, it was through research looking at Scottish comparative mortality trends that the effect of the Troubles on Northern Irish mortality first became apparent: the patterns in Northern Ireland were so bad they make Scotland look healthy in comparison!

[write a couple of paragraphs discussing the following comparison]



END OF WRITING RETREAT - WHAT ARE MY TASKS?

I WANT TO CONTINUE WRITING THIS, AND PRODUCING A CLEAR MODELLING STRATEGY. THE STRUCTURE OF THE PAPER SHOULD EMERGE FROM THIS, AS WELL AS THE LITERATURE I NEED